



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 145 TO FACILITY OPERATING LICENSE NO. DPR-46

NEBRASKA PUBLIC POWER DISTRICT

COOPER NUCLEAR STATION

DOCKET NO. 50-298

1.0 INTRODUCTION

By letter dated April 25, 1991 as supplemented by letter dated June 28, 1991, Nebraska Public Power District (the licensee) submitted a request for changes to the Cooper Nuclear Station, Technical Specifications (TS). The requested changes would reduce the low reactor water level scram setpoint (Level 3) from greater than or equal 12.5 inches above instrument zero to greater than or equal to 4.5 inches above instrument zero. The amendment also makes administrative changes involving editorial and typographical corrections. The June 28, 1991, letter provided clarifying information that did not change the initial proposed no significant hazards consideration determination.

2.0 EVALUATION

The reactor low water level instrumentation is used to initiate a reactor scram and Primary Containment Isolation System (PCIS) Groups 2, 3, and 6 isolations above the Level 3 setpoint. The existing setpoint of greater than or equal to 176.69 inches above top of active fuel has resulted in PCIS actuations as a result of the expected drop in water level following the manual scrams initiated during normal plant shutdowns. The PCIS isolations are undesirable because they require operator response and may interfere with the shutdown evolution. To avoid the PCIS isolations, the licensee increases actual reactor level prior to the manual scram and requested the proposed amendment to decrease the Level 3 setpoint from greater than or equal to 12.5 inches to greater than or equal to 4.5 inches above instrument zero. The decrease in Level 3 may also prevent inadvertent reactor scrams during events involving minor reactor level perturbations.

To support the proposed amendment, the licensee evaluated the impact of the setpoint reduction on the analysis of plant abnormal operational transients and design basis accidents. The delay in the scram actuation which results from the decreased setpoint was determined to have minor impact on the analyzed transients and accidents and in all cases the analytical results remained within acceptable limits. The proposed change was also evaluated with respect to the PCIS and was determined to not impact the ability of the isolations to perform their safety function.

The setpoint of 4.5 inches above instrument zero which was evaluated and provided in the proposed TS changes is an analytical limit justified by the

analysis and evaluations performed by the licensee and GE. The actual trip point for the Level 3 instrumentation will be set above the analytical limit in accordance with licensee procedures for instrument setpoint control to allow sufficient margin for instrument accuracy and setpoint drift.

The editorial changes consist of minor abbreviation and USAR reference revisions to improve consistency and correction of a typographical error in Table 3.2.B associated with the HPCI Reactor Low Low Water Level Setting (addition of missing negative sign).

Based upon the review of the proposed TS changes and supporting analyses and evaluations, the staff has determined that the TS changes are acceptable.

### 3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Nebraska State official was notified of the proposed issue of the amendment. The State official had no comment.

### 4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes in surveillance requirements. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding (FR citation). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR Section 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

### 5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

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Date: July 31, 1991